

REMARKS

Claims 1-20 are pending. Applicants respectfully request reconsideration and reexamination of the pending claims.

Applicants respectfully acknowledge the observation noted by the Examiner that "the position argued is not commensurate in scope with the claimed invention." In that regard, claim 1 has been amended to reflect the enhanced contrast nature of embodiments of the invention. For example, consider Figure 6b, which illustrates how the thickness of the SiON layer may be varied to enhance the optical contrast between the amorphous and crystalline states of the underlying phase-change layer. Accordingly, Applicants have support for the added limitation of "wherein a thickness of the first dielectric layer is selected to enhance an optical contrast between an amorphous state of the first metal/alloy layer and a crystalline state of the first metal/alloy layer." No new matter is added. With respect to claim 1, Applicants readily admit that a phase-change layers made of "tin, antimony and an element selected from the group consisting of indium, germanium, aluminum, and zinc" as recited in claim 1, for example, were known in the optical disk arts. Moreover, the use of silicon oxynitride as a protective layer was also known in the optical disk arts. However, this use of silicon oxynitride as a protective layer served to prevent oxidation of underlying data layers. A phase-change layer made of "tin, antimony and an element selected from the group consisting of indium, germanium, aluminum, and zinc" does not need protection from oxidation. Instead, Applicants have discovered that a layer of silicon oxynitride enhances the contrast (as suggested by the title of the present application) of such a phase-change layer.

The claim rejections will now be addressed directly. Consider, for example, claim 1, which has been rejected over a number of Kodak references (USPs 4960680, 4774170, 4812386, and 4798785) that disclose the use of the claimed phase change layer that is comprised of "tin, antimony and an element selected from the group consisting of indium,

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germanium, aluminum, and zinc.” However, nowhere in these references is a teaching or suggestion regarding the contrast enhancement recited in claim 1, namely the provision of “a first dielectric layer overlaying the first metal/alloy layer, ..., wherein a thickness of the first dielectric layer is selected to enhance an optical contrast between an amorphous state of the first metal/alloy layer and a crystalline state of the first metal/alloy layer.” To provide this missing teaching, the “in view of references” EP 0945860 and JP 03-086943 have been cited. However, the JP reference concerned the use of a magneto-optic recording medium (see, e.g., page 6, second column which describes a layer of TbFeCO magneto-optic recording medium). As is well-known in the storage disk arts, such a magneto-optic recording medium is sensitive to oxidation such that it requires a protective layer. In sharp contrast, a recording medium comprised of “tin, antimony and an element selected from the group consisting of indium, germanium, aluminum, and zinc” does not need to be protected from oxidation. As such, there would be no motivation to apply the needed magneto-optic protection taught by the JP reference to the Kodak phase-change layers. The EP reference adds nothing further because it discloses a Te or Se chalcogenide which also requires protection from oxidation (see, e.g., page 2, paragraph [0006]). Accordingly, the EP reference provides no motivation to apply its oxidation-prevention to a phase-change layer that needs no such protection. Thus, claim 1 is patentable over the art of record.

Because claims 2 through 12 depend either directly or indirectly upon claim 1, they are patentable for at least the same reasons.

Claim 13 recites a method of forming the disk recited in claim 1. Accordingly, claim 13 is patentable over the art of record for at least the same reasons discussed with respect to claim 1.

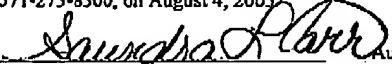
Because claims 14 through 20 depend either directly or indirectly upon claim 13, they are patentable over the art of record as discussed with respect to claim 13.

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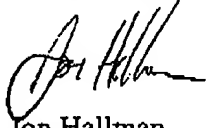
CONCLUSION

For the above reasons, pending Claims 1-20 are in condition for allowance and allowance of the application is hereby solicited. If the Examiner has any questions or concerns, a telephone call to the undersigned at (949) 752-7040 is welcomed and encouraged.

I hereby certify that this correspondence is facsimile transmitted to the Commissioner for Patents, Alexandria, VA 22313-1450, at 571-273-8300, on August 4, 2005.


Saundra Carr August 4, 2005
Date of Signature

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